

DXC Technology Quality Engineering Advisory Services

G-Cloud 15:
Service Definition Document

Table of Contents

1	Company Overview	2
2	DXC's Quality Engineering Advisory	3
3	Service overview.....	5
4	Case Studies	14

1 Company Overview

DXC Technology is a Fortune 500 global IT services leader. Our more than 130,000 people in 70-plus countries are entrusted by our customers to deliver what matters most. We use the power of technology to deliver mission critical IT services across the Enterprise Technology Stack to drive business impact. DXC is an employer of choice with strong values, and fosters a culture of inclusion, belonging and corporate citizenship.

We deliver the IT services our customers need to modernise operations and drive innovation across their entire IT estate. We provide services across the Enterprise Technology Stack for business process outsourcing, analytics and engineering, applications, security, cloud, IT outsourcing and modern workplace.

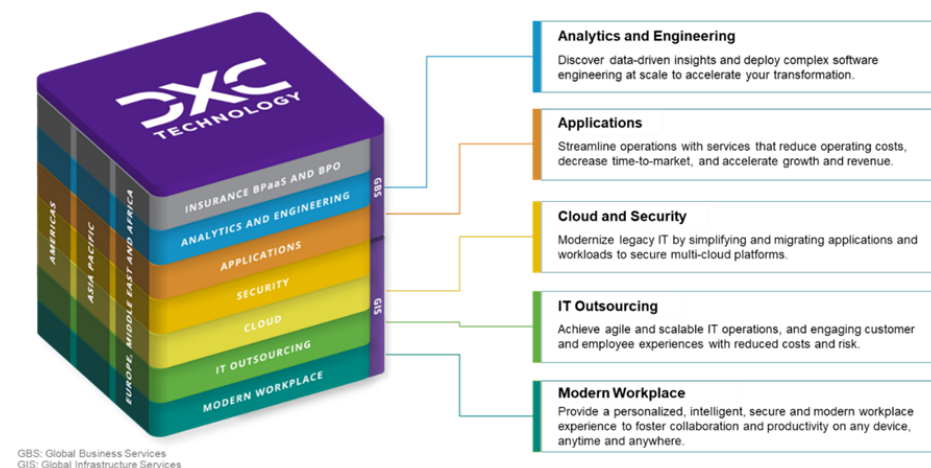


Figure 1. DXC Technology stack

Every day, we earn our customers' trust by delivering transformative technologies to ensure the success, safety and well-being of businesses and people worldwide. Our globally connected centres enable us to solve complex technology challenges and transform our customers' businesses through our dedicated delivery workforce.

With globally distributed teams and rich engineering skills, DXC offers competitive solutions to address customers' cost, regulatory, language and business continuity requirements. We leverage the power of partnerships through our curated DXC ecosystem of technology leaders. By combining strengths and expertise globally, we create solutions and deliver greater outcomes for customers across the Enterprise Technology Stack.

Our values are the fabric of DXC. They bind us together regardless of where or how we work and position us to succeed on our transformation journey:



Deliver

We do what we say we are going to do.



Care

We take care of each other and foster a culture of inclusion and belonging.



Do the right thing

We act with integrity.



Collaborate

We work as a team – globally and locally.



Community

We believe in stewardship and building a sustainable company that supports our communities.

2 DXC's Quality Engineering Advisory Services

At DXC Technology we drive testing innovation and continuous improvement through the application of robust, standards based Advisory Service processes to transform end-to-end quality management solutions that are faster, more scalable and more cost-effective:

DXC QE Advisory Services:

- Testing Quality Assessment
- Testing Health Check
- Test Automation Assessment & Proof of Concept
- Applications Security Advisory
- AI Powered Testing Advisory
- Enterprise Test Strategy

These services are for clients in the following situations:

- Requirement to formally measure the Test Maturity of a Clients Testing practice or Services for reputational or regulatory reasons
- Need expert support to navigate through the new frontier of GenAI in a safe, growth-oriented and reliable way!
- Business pressure to release applications faster/more frequently - reducing testing cycles with high quality.
- Defects are leaking into production and need a recovery roadmap to reduce occurrences
- Clients needs to modernise testing practices, but teams are too busy to innovate
- Current automation processes have not delivery the ROI expected

2.1 Key Conditions

- Delivery **location is flexible**, with DXC providing local security cleared, near shore European resources or offshore resources from global delivery locations.

2.2 Why choose DXC to assess your testing organisation?

- DXC delivers a proven rapid advisory services in 2-8 weeks that upon implementation of the recommendations can help clients to reduce cost, improve quality and improve the speed of delivering testing.

Transformed QA Maturity	Client	Benefits
Level 4  Level 2	Energy Provider	• Reduced UAT defects from 65% to 21% • Reduced Production defects from 11% to 0.65% • Reduced the test cycle time from 4.5 weeks to 2 weeks
Level 4  Level 1	Airline	• 60% reduction in regression test cycle's manual effort • 40% reusability of automation framework components • 80% reduction in test data preparation effort • 60% unification of processes
Level 4  Level 2	Insurer	• 40% reduction in automation effort • Zero severity 1 & 2 defects in production • 40% reduction in defect leakage into UAT
Level 4  Level 1	Insurer	• Test Case Authoring productivity increased by 3X • Test Case Execution productivity increased by 6X • Production Warranty reduced by 95% • YoY Overall testing costs reduced by 64%

Figure 1: Client example outcomes

- DXC has successfully implemented our approach on many Public and Private Sector engagements delivering tangible improvements that our customers have recognised as delivering excellent return on investment.
- As a Global Systems Integrator, with a testing practice comprising 10,000+ testing professionals we have a highly skilled testing organisation exposed to every kind of testing approach across the industry.

3 Services overview

DXC's has 6 Quality Engineering Advisory services available:

- A **Testing Quality Assessment (TQA)** is an objective, critical examination of all the testing practices for a project, programme or organization, that produces recommendations for improvement, benchmarked against industry best practices and standards.
- A **Testing Quality Assessment Healthcheck** is a faster format review of a Testing organization's maturity. It identifies potential problem areas only. It can also be known as a "Testing Discovery"
- **Test Automation Assessment & POC Advisory Service:** Understanding your current state of automation and the roadmap to the future state
- **AI Testing Readiness Advisory Service:** We are the guides that help navigate the new frontier of AI & GenAI in Software Testing
- **Applications Security Advisory Service:** Understanding your applications security environment
- **Enterprise Test Strategy:** Define your organisational testing policy and overarching strategy for all programmes and projects testing

3.1 Testing Quality Assessment

A Testing Quality Assessment is an objective, critical examination of all the testing practices for a project, programme or organization, that produces recommendations for improvement, benchmarked against industry best practices.

Our assessments are delivered through our Test Consultancy practice utilising the most experienced test professionals with up-to 40 years of test experience.

We have matured our assessment methodology over many years, taking inputs & elaborating from the best of the breed test Industry standard industry process improvement Models such as TMMI (Testing Maturity Model Integration), TMM (Testing Maturity Model) and TPI (Test Process Improvement), therefore providing a common framework and language that testing professionals across your engagements will recognise.

The TQA analyses the following dimensions:

1. Reqs Dev & Management
2. Project Program / Test Planning
3. Defect Management
4. Test Analysis Design
5. Code Level Testing
6. System Level Testing
7. Test Automation / Performance
8. Environment / Data Management
9. Configuration / Testware Management

The following activities make up the approach to conducting a TQA, these can vary according to the breadth and depth of the TQA and the number of Test Consultants involved:

1. Send out and analyse specially designed testing Surveys
2. Produce Quality Maturity Charts from the survey results
3. We Interview a cross section of TQA participants

4. Review documentation relating to the Program / Project (e.g., planning, reporting, risk, change), Requirements, Development, Configuration management and Testing
5. Update and revise Quality Maturity Charts based on interviews and documentation reviewed
6. Compare results with 'Best Practices'
7. Present interim findings on larger engagements
8. Analyse Gaps from findings to determine Recommendations for improving test practices
9. Finally, we Present recommendations to the Client

3.1.1 Benefits

The TQA helps to find gaps and establish improvement roadmap in order to achieve a higher maturity for your software testing function. It helps to:

- Get an independent view on strengths and opportunities for improvement to target the future efforts appropriately
- Establish credibility by providing facts in a structured manner to the leadership team
- Enable the organisation to Improve quality by detecting and fixing software problems earlier in the lifecycle
- Prioritise opportunities for improvement
- Standardise processes and people to give predictable results
- Reduce time to market
- Optimise testing spend and focus investments where they deliver the most value
- Reduce testing costs
- Leverage best-practices
- Make informed decisions using metrics and dashboards
- Speed up testing and improve communication between development and testing teams for faster time to market and ultimately gain competitive advantage

Previous key improvements of implementing the DXC's TQA recommendations include:

Table 1. Recommendations for key improvements

Improving Quality (by 20% to 30%)	Increasing Test Coverage (up-to 80% plus)	Reducing the Cost of Quality (saving 15 to 50% of costs)
Identifying defects during the early stages of delivery and test (shift left defects)	Reduction in warranty and production defects through improved test coverage	Standardisation of tools and streamlining test processes.
Measuring test progress, application quality and production readiness using optimal metrics.	Automating Test data and introducing improved automation and robotics.	Building reusable test assets (process, templates, automation framework and automation building blocks)
Adoption of Risk based testing and requirements ambiguity and traceability	Using scriptless testing and test recording to improve automation coverage whilst reducing cost to automate and maintain regression suites.	Reducing the time and cost of knowledge transfer

3.2 Testing Quality Assessment Healthcheck

A Testing Quality Assessment Healthcheck is a faster format review of an organisation testing maturity.

It identifies potential problem areas only based on standard industry good practices and SME experience.

It can also be known as a “Testing Discovery”.

Our assessments are delivered through our Test Consultancy practice utilising the most experienced test professionals with up-to 40 years of test experience.

The TQA healthcheck analyses the following dimensions:

1. People – staff and organisation
2. Process and Methods
3. Work Products and Deliverables
4. Metrics and KPIs
5. Tools and Technology

The following activities make up the approach to conducting a TQA, these can vary according to the breadth and depth of the TQA and the number of Test Consultants involved:

1. **Surveys** received from participants
2. Produce **Quality Maturity Charts** directly from the survey results
3. **Review documentation** relating to the testing project or processes in scope
4. **Interview** staff will complete the surveys as individuals, no group sessions
5. **Compare** with ‘Best Practices’
6. **Present** interim bullet point findings in a PowerPoint presentation
7. **Analyse key gaps** from findings to determine **Recommendations** for improving testing practices

3.2.1 Benefits

The TQA healthcheck helps to find gaps and establish improvement roadmap in order to achieve a higher maturity for your software testing function. It helps to:

- Get an independent view on strengths and opportunities for improvement to target the future efforts appropriately
- Establish credibility by providing facts in a structured manner to the leadership team
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3.3 Test Automation Assessment & Proof of Concept

It unlocks the potential of testing automation for measurable cost and quality benefits to client projects

DXC SME's will assess automation feasibility including any current or previous automation projects by:

- Reviewing designs and initial documentation to select sample scripts to test automation
- Selection of target test automation tool
- Define scope and priorities of the automation PoC
- Identifying scope of automation and limitations
- Automate the agreed sample PoC tests
- Costing automation and execution of test scripts for ROI
- Providing a test automation POC report detailing results of above

Our assessments are delivered through our Test Consultancy practice utilising the most experienced test professionals with up-to 40 years of test experience.

The following activities make up the approach to conducting a TQA, these can vary according to the breadth and depth of the assessment and PoC and the number of Test Automation SMEs involved:

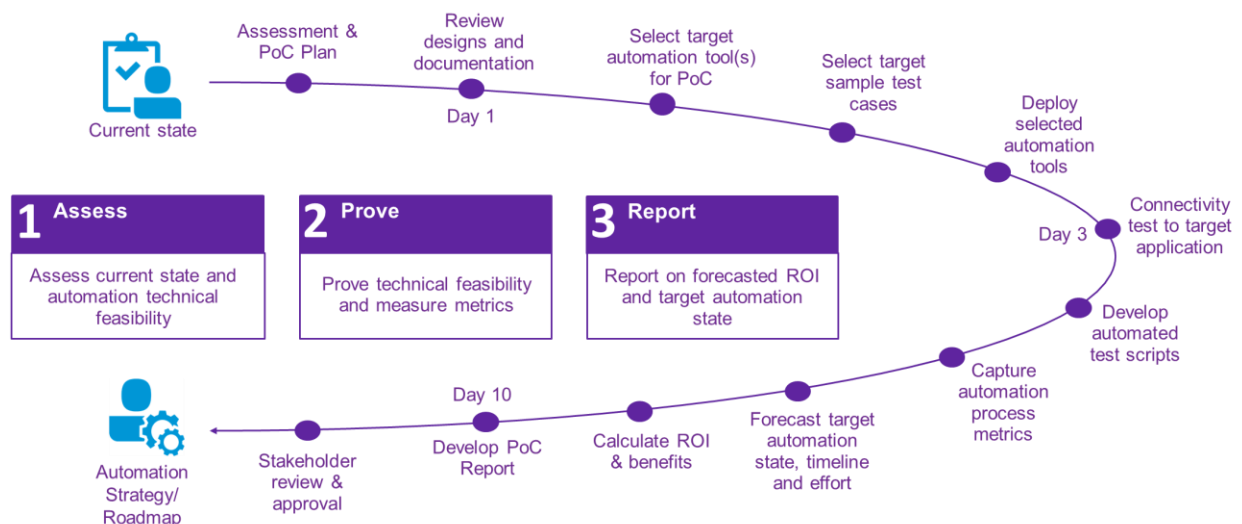


Figure 2: Test Automation Assessment & Proof of Concept Approach

3.3.1 Benefits

Understanding what benefits we bring to the existing Client's Automation capability:

- **Early Automation:** On confirmation of test requirements, test automation can be conducted to develop manual test cases and automation scripts.
- **Faster time to market and increased ROI:** Provides competitive advantage and enables routing of cost savings to other IT and business initiatives

- **Pre-built function libraries:** Reduces the cost of developing an automation test suite by up to 50%. They enable generation of automated scripts.
- **Offline automation:** Lowers investment in test tool licenses by limiting the need for multiple test tool licenses to the test execution phase. Licenses are required only during test execution and creation of the object repository for the application under test (AUT)
- **Reusable business components:** Enables higher reusability and reduced effort during maintenance. Automated test cases based on the design of the business processes result in higher reuse of scripts
- **End-to-end automation framework:** Scalable and extensible automation framework covering multiple application technology platforms and packages ensures lower investment cost and faster ROI as the framework is well defined, easy to use, robust and scalable
- **Robotic Testing Capability:** Reduces cost, increases coverage and can have a marked efficiency when maintaining / creating scripts.

3.4 Applications Security Advisory Service

Using our extensive experience in applications security, we bring highly experienced resources to help you understand your current apps security environment.

Collaboratively, DXC will conduct an application security / software assurance gap analysis and roadmap recommendations to close gaps, increase software assurance and lower your risk.

By gaining an understanding of your current readiness, we can help you implement processes to strengthen your applications defenses.

The Applications Security Advisory Service analyses the following service components:

- Review regulatory and legal drivers & requirements for your particular industry and situation
- Examine current application security / software assurance practices in relation to industry standard and best practices
- Assess software assurance lifecycle maturity and gaps
- Recommend SDLC process, tool and methodology modifications to fully incorporate security into the secure software development lifecycle (Secure SDLC)

3.4.1 Benefits

- Application security / software assurance gap analysis
- Develop roadmap recommendations to close gaps
- Implementing recommendations to increase software assurance and bolster applications security governance
- Apply processes and procedures to significantly lower risk from application vulnerabilities

3.5 AI Powered Testing Advisory

AI-powered instruments are transforming software testing by enhancing efficiency, enabling early defect detection and maintaining consistency across various testing levels, including unit, API, functional and nonfunctional testing.

With a combination of DXC's AI-driven testing tools and the best-in-class technologies of our strategic partners, we help you address some of the most challenging aspects of the software testing cycle:

Our assessments are delivered through our Test Consultancy practice utilising the most experienced test professionals with up-to 40 years of test experience.

The AI Powered Testing Advisory analyses and recommends how organisations can transform testing process in the following testing lifecycle areas:

- **Requirements testing:** AI can be used to analyse and validate requirements for clarity and accuracy. The quality of requirements directly impacts the quality of product. Insufficient quality of requirements results in various types of issues in lifecycle Process and Methods
- **AI-assisted test planning:** Leverage AI to analyze historical data, application changes and business priorities to optimize test strategies. AI helps assess risks, prioritize testing efforts and allocate resources efficiently Metrics and KPIs
- **Synthetic test data generation:** Generate realistic, privacy-compliant test data that mimics production data, ensuring diverse scenario coverage without exposing sensitive information.
- **Test case generation:** Automate the creation of comprehensive and optimized test cases, ensuring coverage of all critical scenarios while reducing manual effort.
- **Self-healing test automation:** Test scripts adapt automatically to application changes, reducing script maintenance efforts and preventing disruptions in testing workflows.
- **Defect prediction and triage:** With AI-driven analytics and ML models, potential defects can be predicted before they occur. AI classifies, prioritizes and assigns defects based on severity, enabling teams to resolve critical issues faster while spending less time managing defects.
- **Proactive insights:** Historical data, real-time analytics and AI-driven insights can be used to:
 - predict high-risk areas for increased testing
 - identify untested paths and generate smart test suggestions
 - AI-driven dashboards help teams make data-driven decisions

The following activities make up the approach to conducting an AI Powered Testing Advisory, these can vary according to the breadth and depth of the AI Powered Testing Advisory and the number of Test Consultants involved:

- Discovery session(s) with key stakeholders and engineering teams to help navigate this topic (depends on the size and scope of transformation for the organization; S to M scale – ~16 hours)
- Assessments of AI&GenAI-readiness of existing testing practices
- Recommendations to address the gaps
- Roadmap of AI Adoption in Testing for an organization
- ROM-Proposal to support roadmap implementation
- Advisory activities later down the road for tools & platforms (from fit-for-purpose analysis and PoCs to complete implementation & trainings)

3.5.1 Benefits

The AI Powered Testing Advisory has the following benefits:

- Reducing cost by increasing efficiency
- Outlining a strategy of GenAI / AI Adoption
- Navigating the adoption of AI & GenAI technologies in Testing (and other areas!)
- Increasing automation
- Delivering value faster, reducing feedback loop
- Increasing reliability

3.6 Enterprise Test Strategy

An Enterprise Testing Strategy identifies, at the highest level, the direction for the testing practices for an organization or program.

For the testing practices to be most effective on multiple programs and projects within an organization, an Enterprise Testing Strategy should be developed. This Testing Strategy can provide guidance on all testing activities that must occur on all the organization's programs and projects. Its implementation can be adapted by individual programs and projects to address the right balance of technical and business testing to mitigate risks within the time and other constraints on any project. The strategy can also be tailored based on factors like program and project size and complexity.

Our Enterprise Testing Strategy advisory service is delivered through our Test Consultancy practice utilising the most experienced test professionals with up-to 40 years of test experience.

The following activities make up the approach to conducting a Enterprise Testing Strategy advisory service:

- **Initiate Enterprise Testing Strategy:** documents the high-level scope and objectives of creating the Enterprise/Program Testing Strategy. These
- **Perform Current Situation Analysis:** reviews all the available material, noting missing information and areas of concern. These areas are discussed with subject-matter experts in order to understand the process and identify solutions.
- **Develop Enterprise Testing Strategy:** This process consists of documenting the following:
 - Introduction to the organization, objectives and scope of testing within the organization.
 - Testing approach, organization and methodology
 - Test levels and types to be performed
 - Approach to managing the testing processes
 - Testing environment and tools
 - Approach to test automation
- **Review and Approve Enterprise Testing Strategy:** review is performed by personnel who have knowledge of the particular testing activity and who understand the Statement of Work and the testing requirements. The review process further ensures efficient and quality test coverage.

3.6.1 Benefits

The TQA healthcheck helps to find gaps and establish improvement roadmap in order to achieve a higher maturity for your software testing function. It helps to:

- Get an independent view on strengths and opportunities for improvement to target the future efforts appropriately
- Establish credibility by providing facts in a structured manner to the leadership team
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4 Engagement

The below table provides the duration and team size details indicative of a typical engagement model and is variable dependent upon the scope of the engagement.

Table 2. Duration and team size details

Advisory Service	Duration	Team Size	Notes
Testing Quality Assessment	4-8 weeks	2	Duration depends on assessment complexity • A High complexity assessment could be considered as a review of 2 projects with more than 25 employees dedicated / partially dedicated to testing. • A Low complexity assessment could be considered as a review of 1 project with less than 10 employees dedicated / partially dedicated to testing.
Testing Health Check	2-4 weeks	1-2	
Test Automation Assessment & Proof of Concept	3-4 weeks	1	
Applications Security Advisory	4 weeks	1	
AI Powered Testing Advisory	6-8 weeks	1	
Enterprise Test Strategy	6 weeks	1	

5 Case Studies

The following diagram shows some examples of clients achieving greater benefits as DXC transform the testing services by implementing assessment recommendations.

5.1 Case Study 1

Client Profile	UK Insurer
Assessment Engagement Overview	DXC conducted an automation assessment to validate that automation can be performed for the Exceed application (Web), Main Frames, and Web Services using TestMagic™ and that TestMagic™ will provide more savings than the existing UFT automation framework. The objectives and outcomes of the automation assessment are listed below: • E2E execution using the same Tool - Validated E2E Test Case - starting from Web (Exceed) to Main Frames to Web (Exceed) and Web Services to Web (Exceed). • Achieve maximum automation coverage - Validated that TestMagic™ can support Exceed (web), Mainframe, and Webservices platforms and thus increases the automation coverage. • 60% (1000+ hours of saving over the year) reduction of automated scripts maintenance and execution effort over the current automation - Validated savings of ~70% in execution effort is achievable and saving of 60-70% in maintenance and execution effort per release. • Same automated scripts can be extended for Integration and UAT phases - Scripts were executed in two environments. • Automation scripting without application availability – Scripted using click path/ wireframes

5.2 Case Study 2

Client Profile	Electricity Provider
Challenges	• Abnormally high defect creep into production • Inadequate test coverage • No clear visibility into testing activities • Frequent schedule deviations/changes • High amount of re-work in fixing production defects • Lack of knowledge management • No testing dashboards / metrics to provide insight into quality of the applications

Client Profile	Electricity Provider
	- DXC conducted a Test Organisation Assessment followed by an Implementation phase to implement the recommendations Phase 1: - As-Is Assessment of the Test organisation - Capacity and demand analysis for testing activities DXC Solution - Prioritised set of recommendations - High level roadmap for implementation Phase 2: - Defined and implemented comprehensive measurement framework - Collected metrics data and generated dashboards at pre-defined intervals - Progress monitoring and governance
Benefits	Improved overall quality by reducing production defect leakage from 9% to 3% Structured approach to Test Management Go/No-Go decisions based on quantitative information Reduced time to market

5.3 Case Study 3

Client Profile	Airline
Challenges	- Applications spread across different channels required a granular and optimised operational model for effective applications testing - Challenges in meeting Business Quality objectives with aggressive frequent releases across the year - Decentralised QA - Lack of consistent process methodology, tools and processes across tracks - High cost of maintenance for quality management - No Knowledge management and retention approach - High number of production bottlenecks

Client Profile	Airline
DXC Solution	DXC conducted a Test Organisation Assessment followed by an Implementation phase to implement the recommendations covering below areas
	Quality • Implement a Test Center of Excellence • Add formal QA practices and standards • Expand use of testing tools across portfolios • Use metrics to assess progress and production readiness • Implement knowledge management framework
	Increase speed to market • Standardise tools and streamline processes • Automate test data creation, increase test execution automation • Automated test case generator for web services
	Reduce costs • Optimise resource utilisation • Shift left - identify defects earlier in SDLC • Build reusable test assets
Benefits	• Reduced 500 person hours of effort by developing reusable assets • 60% reduction in manual execution effort • 80% reduction in manual test data management effort • 80% reduction in dependency on customer domain specialists